

IN THE CLAIMS:

Please enter the attached listing of claims into the application. This listing of claims replaces all prior listing of claims in the application.

LISTING OF CLAIMS

1-10. (Cancelled)

11. (Withdrawn) The panel of claim 10, where the panel is selected for analysis of polynucleotide expression levels for colorectal cancer and colorectal polyps.

12. (Withdrawn) The panel of claim 11, where the polynucleotide expression levels are mRNAs.

13. (Withdrawn) The panel of claim 11, where the polynucleotide expression levels are cDNAs.

14. (Withdrawn) The panel of claim 10, where at least one of the polynucleotides is a fragment.

15. (Withdrawn) The panel of claim 10, where at least one of the polynucleotides is a variant.

16. (Withdrawn) The panel of claim 10, where the panel is used in the management of patient care for colorectal cancer and colorectal polyps.

17. (Withdrawn) The panel of claim 16, where the management of patient care includes one or more of risk assessment, early diagnosis, establishing prognosis, monitoring patient treatment, and detecting relapse.

18. (Withdrawn) The panel of claim 10, where the panel is used in discovery of therapeutic intervention of colorectal cancer and colorectal polyps.

19. (Cancelled)
20. (Withdrawn) The panel of claim 19, where the panel is selected for analysis of polynucleotide expression levels for colorectal cancer and colorectal polyps.
21. (Withdrawn) The panel of claim 20, where the polynucleotide expression levels are mRNAs.
22. (Withdrawn) The panel of claim 20, where the polynucleotide expression levels are cDNAs.
23. (Withdrawn) The panel of claim 19, where at least one of the polynucleotides is a fragment.
24. (Withdrawn) The panel of claim 19, where at least one of the polynucleotides is a variant.
25. (Withdrawn) The panel of claim 25, where the panel is the basis for management of patient care in colorectal cancer and colorectal polyps.
26. (Withdrawn) The panel of claim 19, where the management of patient care includes one or more of risk assessment, early diagnosis, establishing prognosis, monitoring patient treatment, and detecting relapse.
27. (Withdrawn) The panel of claim 25, where the panel is used in discovery of therapeutic intervention of colorectal cancer and colorectal polyps.
28. (Withdrawn) A panel of biomarkers for colorectal cancer and colorectal polyps comprising at least two polypeptides selected from SEQ ID NOs 23-27.
29. (Withdrawn) The panel of claim 28, where the panel is selected for analysis of polypeptide expression levels for colorectal cancer and colorectal polyps.

30. (Withdrawn) The panel of claim 28, where at least one of the polypeptides is a fragment.

31. (Withdrawn) The panel of claim 28, where at least one of the polypeptides is a variant.

32. (Withdrawn) The panel of claim 28, where the panel is used in the management of patient care in colorectal cancer and colorectal polyps.

33. (Withdrawn) The panel of claim 32, where the management of patient care includes one or more of risk assessment, early diagnosis, establishing prognosis, monitoring patient treatment, and detecting relapse.

34. (Withdrawn) The panel of claim 28, where the panel is used in discovery of therapeutic intervention of colorectal cancer and colorectal polyps.

35. (Withdrawn) A panel of biomarkers for colorectal cancer and colorectal polyps comprising: at least two polypeptides selected from SEQ ID NOs 23-27; and at least one polypeptide selected from SEQ ID NOs 28-36.

36. (Withdrawn) The panel of claim 35, where the panel is selected for analysis of polypeptide expression levels for colorectal cancer and colorectal polyps.

37. (Withdrawn) The panel of claim 35, where at least one of the polypeptides is a fragment.

38. (Withdrawn) The panel of claim 35, where at least one of the polypeptides is a variant.

39. (Withdrawn) The panel of claim 35, where the panel is used in the management of patient care in colorectal cancer and colorectal polyps.

40. (Withdrawn) The panel of claim 39, where the management of patient care includes one or more of risk assessment, early diagnosis, establishing prognosis, monitoring patient treatment, and detecting relapse.
41. (Withdrawn) The panel of claim 35, where the panel is used in discovery of therapeutic intervention of colorectal cancer and colorectal polyps.
42. (Withdrawn) A panel of biomarkers for colorectal cancer and colorectal polyps comprising: at least two polypeptides selected from SEQ ID NOs 23-27; at least one polypeptide selected from SEQ ID NOs 28-36; and at least one polypeptide selected from SEQ ID NOs 37-44.
43. (Withdrawn) The panel of claim 42, where the panel is selected for analysis of polypeptide expression levels for colorectal cancer and colorectal polyps.
44. (Withdrawn) The panel of claim 42, where at least one of the polypeptides is a fragment.
45. (Withdrawn) The panel of claim 42, where at least one of the polypeptides is a variant.
46. (Withdrawn) The panel of claim 42, where the panel is used in the management of patient care in colorectal cancer and colorectal polyps.
47. (Withdrawn) The panel of claim 46, where the management of patient care includes one or more of risk assessment, early diagnosis, establishing prognosis, monitoring patient treatment, and detecting relapse.
48. (Withdrawn) The panel of claim 42, where the panel is used in discovery of therapeutic intervention of colorectal cancer and colorectal polyps.

49. (Currently Amended) A method for assessing the risk ~~determination of~~ colorectal cancer and colorectal polyps, comprising:
- selecting a panel of biomarkers comprising at least two polynucleotides selected from the group consisting of SEQ ID Nos:1, 2 and 5;
 - ~~obtaining a biological colorectal sample from a subject;~~
 - ~~isolating cellular RNA from the sample;~~
 - amplifying and quantifying RNA expression levels in a biological colorectal sample from a subject for each biomarker in the panel comprising the at least two polynucleotides selected from the group consisting of SEQ ID Nos:1, 2 and 5; and
 - comparing the quantified expression levels of each biomarker including the at least two polynucleotides in the sample to each of the same biomarker expression level in a normal control colorectal sample, wherein a difference when analyzed by a multivariate analysis of variance (MANOVA) in the expression levels in the biological sample compared to the normal control is indicative of a colorectal cancer and colorectal polyps.
50. (Withdrawn) The method of claim 49, where the step of selecting a panel of biomarkers further comprises at least one polynucleotide from SEQ ID NOs 6-14.
51. (Previously Presented) The method of claim 49, where the step of selecting a panel of biomarkers further comprises: at least one polynucleotide from SEQ ID Nos: 15 and 16.
52. (Currently Amended) The method of claim 51, where the step of amplifying ~~copies of cDNA~~ further comprises using at least two sets of primers chosen from (i) SEQ ID NO:45 and 46, (ii) SEQ ID NO:47 and 48, (iii) SEQ ID NO:53 and 54, (iv) SEQ ID NO:73 and 74 and (v) SEQ ID NO:75 and 76.
53. (Currently Amended) The method of claim 52, where the step of amplifying ~~copies of cDNA~~ further comprises using enzymes and reagents for the preparation of cDNAs.

54. (Original) The method of claim 49, where the step of quantifying the levels of cDNA further comprises labeling cDNA.

55. (Original) The method of claim 54, where labeling cDNA includes at least one chromophore.

56. (Cancelled).

57. (Currently Amended) The method of claim 49, wherein an increase in at least one biomarker of the selected biomarker panel in the sample compared to levels of corresponding biomarkers from the normal control identifies the subject as a candidate for the risk management of colorectal cancer and colorectal polyps, wherein the management is selected from one or more of risk assessment, early diagnosis, establishing prognosis, monitoring patient treatment, and detecting relapse.

58-60. (Cancelled)

61. (Currently Amended) The method of claim ~~[[60]] 49~~, ~~where the step of further comprising~~ obtaining a sample of colorectal cells is by minimally invasive or non-invasive techniques.

62. (Original) The method of claim 61, where the minimally invasive step is by use of a swab.

63. (Currently Amended) The method of claim ~~[[60]] 61~~, ~~where the step of~~ obtaining a sample of colorectal cells is non-invasive.

64. (Previously Presented) The method of claim 61, where the non-invasive step is by collection of a stool sample.

65. (Withdrawn) A method for measuring expression levels of polypeptides from biomarkers for colorectal cancer and colorectal cancer, comprising: selecting a panel of biomarkers comprising at least two polypeptides from SEQ ID NOs 23-27; obtaining a biological sample; creating an antibody panel for each biomarker in the panel; using the antibody panel to bind the polypeptides from the sample; and quantifying levels of polypeptides bound from the sample to the antibody panel.
66. (Withdrawn) The method of claim 65, where the step of selecting a panel of biomarkers further comprises at least one polypeptide from SEQ ID NOs 28-36.
67. (Withdrawn) The method of claim 65, where the step of selecting a panel of biomarkers further comprises: at least one polypeptide from SEQ ID NOs 28-36; and at least one polypeptide from SEQ ID NOs 37-44.
68. (Withdrawn) The method of claim 65, where the polypeptide levels for the sample are compared to a control.
69. (Withdrawn) The method of claim 68, where the comparison is used in the management of patient care in colorectal cancer and colorectal polyps.
70. (Withdrawn) The method of claim 69, where the management of patient care includes one or more of risk assessment, early diagnosis, establishing prognosis, monitoring patient treatment, and detecting relapse.
71. (Withdrawn) The method of claim 68, where the comparison is used in discovery of therapeutic intervention of colorectal cancer and colorectal polyps.
72. (Withdrawn) The method of claim 65, where the step of obtaining a biological sample is by obtaining a sample of colorectal cells.
73. (Withdrawn) The method of claim 72, where the step of obtaining a sample of colorectal cells is minimally invasive.

74. (Withdrawn) The method of claim 73, where the minimally invasive step is by use of a swab.

75. (Withdrawn) The method of claim 72, where the step of obtaining a sample of colorectal cells is non-invasive.

76. (Withdrawn) The method of claim 75, where the non-invasive step is by collection of a stool sample.

77. (Withdrawn) The method of claim 65, where the step of quantifying the bound polypeptides further comprises labeling the polypeptides.

78. (Withdrawn) The method of claim 77, where labeling the polypeptides comprises using a second antibody.

79. (Currently Amended) A kit for assessing the risk ~~the determination~~ of colorectal cancer and colorectal polyps comprising: at least one reagent that is used in analysis of polynucleotide expression levels for a panel of biomarkers for colorectal cancer and colorectal polyps, where the panel comprises at least two polynucleotides listed in SEQ ID Nos:1, 2 and 5; the kit comprising oligonucleotides comprising the sequences set forth in SEQ ID NO:45, 46, 47, 48, 53 and 54; a control comprising a normal level of a biomarker in a colorectal sample and instructions for using the kit for analyzing the expression levels.

80. (Withdrawn) The kit of claim 79, where the panel of biomarkers further comprises at least one polynucleotides listed in SEQ ID NOs 6-14.

81. (Previously Presented) The kit of claim 79, where the panel of biomarkers further comprises: at least one polynucleotide from SEQ ID Nos: 15 and 16.

82. (Original) The kit of claim 79, where the polynucleotide expression levels are mRNAs.

83. (Original) The kit of claim 79, where the polynucleotide expression levels are cDNAs.

84. (Previously Presented) The kit of claim 81, where the reagent comprises at least two sets of primers chosen from (i) SEQ ID NO:45 and 46, (ii) SEQ ID NO:47 and 48, (iii) SEQ ID NO:53 and 54, (iv) SEQ ID NO:73 and 74 and (v) SEQ ID NO:75 and 76.

85. (Original) The kit of claim 84, further comprising reagents for the preparation of cDNA.

86. (Original) The kit of claim 79, comprising a reagent that is used for detection and quantitation of polynucleotides.

87. (Original) The kit of claim 86, where the reagent includes at least one chromophore.

88. (Original) The kit of claim 79, further comprising consumable labware for at least one of sample collection, sample preparation, and sample analysis.

89. (Withdrawn) A kit for the determination of colorectal cancer and colorectal polyps comprising: at least one reagent used in that analysis of polypeptide expression levels for a panel of biomarkers for colorectal cancer and colorectal polyps, where the panel comprises at least two polypeptides listed in SEQ. ID NOs 23-27; and instructions for using the kit for analyzing the expression levels.

90. (Withdrawn) The kit of claim 89, where the panel of biomarkers further comprises at least one polynucleotides listed in SEQ ID NOs 28-36.

91. (Withdrawn) The kit of claim 89, where the panel of biomarkers further comprises: at least one polynucleotide selected from SEQ ID NOs 28-36; and at least one polynucleotide selected from SEQ ID NOs 37-44.
92. (Withdrawn) The kit of claim 89, where the reagent is an antibody reagent that binds a polypeptide selected in the panel.
93. (Withdrawn) The kit of claim 89, further comprising a reagent that is used for detection and quantitation of a bound polypeptide.
- 94-95. (Cancelled)
96. (Currently Amended) The method of claim 57, wherein the at least one ~~cDNA~~ biomarker comprises SEQ ID NO:1.
97. (Currently Amended) The method of claim 57, wherein the at least one ~~cDNA~~ biomarker comprises SEQ ID NO:2.
98. (New) A method for assessing the risk of colorectal cancer, comprising:
selecting a panel of biomarkers comprising polynucleotides having sequences selected from the group consisting of SEQ ID Nos:1 and 2;
obtaining a biological colorectal sample from a subject;
isolating cellular RNA from the sample;
amplifying and quantifying RNA expression levels in a biological colorectal sample from a subject for each biomarker in the panel; and
comparing the quantified expression levels of each biomarker in the sample to each of the same biomarker expression level in a normal control colorectal sample, wherein a difference in the expression levels in the biological sample compared to the normal control is indicative of a colorectal cancer.

99. (New) The method of claim 98, where the step of selecting a panel of biomarkers further comprises at least one additional polynucleotide from SEQ ID NOs: 3-16.
100. (New) The method of claim 98, where the step of quantifying the levels of cDNA further comprises labeling cDNA.
101. (New) The method of claim 100, where labeling cDNA includes at least one chromophore.
102. (New) The method of claim 98, wherein an increase in at least one biomarker of the selected biomarker panel in the sample compared to levels of corresponding biomarkers from the normal control identifies the subject as a candidate for further clinical management including one or more of follow on risk assessment, patient monitoring, and detecting recurrence.
103. (New) The method of claim 98, where the step of obtaining a sample of colorectal cells is minimally invasive or non-invasive.
104. (New) The method of claim 103, where the minimally invasive step is by use of a swab.
105. (New) The method of claim 102, where the step of obtaining a sample of colorectal cells is non-invasive.
106. (New) The method of claim 105, where the non-invasive step is by collection of a stool sample.
107. (New) A method for determination of colorectal cancer, comprising:
selecting a panel of biomarkers comprising polynucleotides having sequences selected from the group consisting of SEQ ID Nos:1 and 2;

amplifying and quantifying RNA expression levels in a biological colorectal sample from a subject for each biomarker in the panel; and

comparing the quantified expression levels of each biomarker in the sample to each of the same biomarker expression level in a normal control colorectal sample, wherein a difference in the expression levels in the biological sample compared to the normal control is indicative of a colorectal cancer.